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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/767,618	01/29/2004	Chen-Hsiung Cheng	9432-158DVB	5657
27572	7590	09/06/2006		
HARNESS, DICKEY & PIERCE, P.L.C. P.O. BOX 828 BLOOMFIELD HILLS, MI 48303				
			EXAMINER	
			ABOAGYE, MICHAEL	
			ART UNIT	PAPER NUMBER
			1725	

DATE MAILED: 09/06/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/767,618

Applicant(s)

CHENG ET AL.

Examiner

Michael Aboagye

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 January 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 11-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 11-19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 January 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|----------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>3/3/06 & 1/26/04</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 11, 12, and 15¹⁹ are rejected under 35 U.S.C. 102(b) as being anticipated by Lai (US Patent No. 6,231,566).

Lai teaches a laser ablating system "100" comprising: a laser source "10", a beam shaping optics "20", a scanner "40" made up of galvanometer scan mirrors, and a computer or tool path control module "50". Said laser ablation system operable to determine a tool path for ablating a layer of material from an exposed surface of a workpiece (cornea) with laser (see, column 4, lines 17-41); wherein the tool path describes a substantially constant arc speed (see, column 2, lines 3- 35); a plurality of lasers (see, column 4, lines 8-16) controlled by said tool path control module to perform ablation of a plurality of workpieces according to the tool path, and wherein said tool path module is operable to formulate a radius and a local angular speed (see, column 4, lines 8-41, figures 1 and 3-5).

Regarding claims 16¹⁹, Lai laser ablating system is operable to ablate or remove successive layers of corneas; wherein each of the corneas is composed of substantially identical material and has substantially identical geometric characteristics and each of the multiple regions the corneas are composed of substantially identical

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material and has substantially identical geometric characteristics (see, column 1 lines 14-20, column 5, lines 7-33).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claims 13 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lai (US Patent No. 6,231,566) in view of Cutler et al. (US 5,798,927).

Lai teaches the elements of claims 11 and 12, as above and, further teaches varying the radius according to a tool pitch by the scanning speed, and wherein said tool path module is operable to determine a tool pitch based on a spot size of the plurality of lasers, but Lai does not expressly teach PZT scan mirror in his disclosed system.

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However, Cutler et al. teaches a laser milling system for performing tool path operation using a piezoelectric transducer as a scanning device which is operable controls the repetition rate and the spot size and positioning by variation of the applied voltage across it (see, Cutler et al., column 10, lines 27-41, and figure 2).

It would have been obvious to one of ordinary skill in the art at the time the applicants' invention was made to have modified the system of Lai by using a PZT scanner as taught by Cutler et al., wherein doing so would have meant, substituting one form of positioning device for another in the same art which would have enabled the appropriate setting of tool pitch for a preferred spot size base on applied voltage per revolution (see, Cutler et al., column 10, lines 27-41).

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Nodal et al. (US 5,948,289), Miyakawa et al. (US 6,091,047) and Sievers (US 6,150,629) are also cited in PTO-892.


7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Aboagye whose telephone number is 571-272-8165. The examiner can normally be reached on Mon - Fri 8:30am - 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Ryan can be reached on 571-272-1292. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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Michael Aboagye
Assistant Examiner
Art Unit 1725
08/30/2008

KEVIN KERNS *Kevin Kerns 8/30/08*
PRIMARY EXAMINER